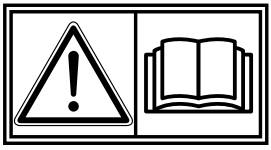
SUBARU

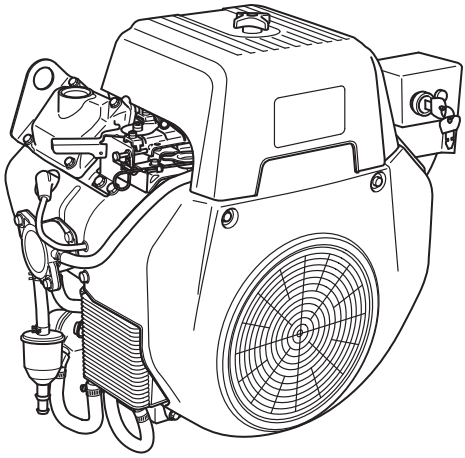
Industrial Power Products

EH72-2D
EH63D/64D/65D



Original

EN *INSTRUCTIONS FOR USE*
FR *MANUEL D'UTILISATION*
ES *MANUAL DE INSTRUCCIONES*
DE *BEDIENUNGSANLEITUNG*
NL *GEBRUIKSAANWIJZING*
IT *MANUALE D'USO E MANUTENZIONE*
RU *РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ*
CN 使 用 说 明 书



2ZZ9990192
(英・仏・西・独・蘭・伊・露・中)

OHV Gasoline Engines

(California Proposition 65)

⚠ WARNING: ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

(California only)

AIR INDEX

To show compliance with California emission regulations, a hangtag has been provided displaying the Air Index level and durability period of this engine.

The Air Index level defines how clean an engine's exhaust is over a period of time. A bar graph scaled from "0" (most clean) to "10" (least clean) is used to show an engine's Air Index level. A lower Air Index level represents cleaner exhaust from an engine.

The period of time (in hours) that the Air Index level is measured is known as the durability period. Depending on the size of the engine, a selection of time periods can be used to measure the Air Index level (see below).

Descriptive Term		Applicable to Emissions Durability Period
Moderate	-	50 hours (engine from 0 to 80 cc)
		125 hours (engine greater than 80 cc)
Intermediate	-	125 hours (engine from 0 to 80 cc)
		250 hours (engine greater than 80 cc)
Extended	-	300 hours (engine from 0 to 80 cc)
		500 hours (engine greater than 80 cc)
		1000 hours (225 cc and greater)

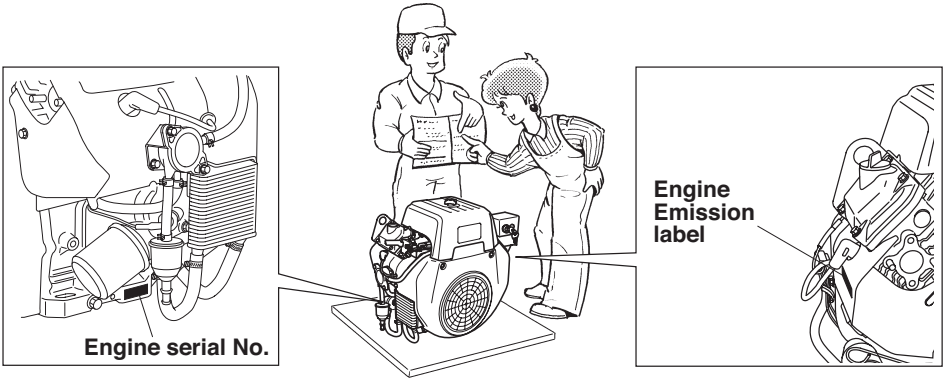
Notice : This hangtag must remain on this engine or piece of equipment, and only be removed by the ultimate purchaser before operation.

Notice : FEDERAL EMISSION COMPONENT DEFECT WARRANTY and CALIFORNIA EMISSION CONTROL WARRANTY are applicable to only those engines/ generators complied with EPA (Environmental Protection Agency) and CARB (California Air Resources Board) emission regulations in the U.S.A.

Notice : To the engines/generators exported to and used in the countries other than the U.S.A., warranty service shall be performed by the distributor in each country in accordance with the standard Robin engine/generator warranty policy as applicable.

FOREWORD

Thank you very much for purchasing a **ROBIN ENGINE**.



Your ROBIN ENGINE can supply the power to operate various sorts of machines and equipment.
Please take a moment to familiarize yourself with the proper operation and maintenance procedures in order to maximize the safe and efficient use of this product.
Due to constant efforts to improve our products, certain procedures and specifications are subjected to change without notice.
When ordering spare parts, always give us the MODEL, SPECIFICATION and SERIAL NUMBER of your engine.
Please fill in the following blanks after checking the specification number on your engine.

SPEC NO. | E | H | | | | | | | | | | | | |

SERIAL NO. | | | | | | | |

For your nearest ROBIN distributor (and/or dealer), you are able to check at our ROBIN website of the following URL;

http://www.subaru-robin.jp

CONTENTS

SYMBOLS

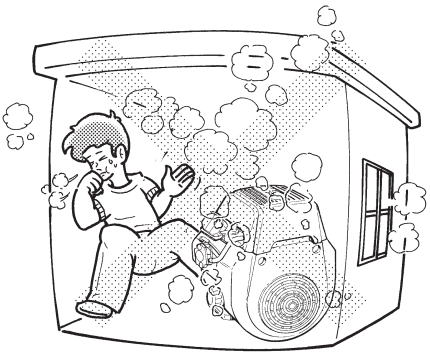
	*Read manual.*		*Shutt off fuel valve when the engine is not in use.*
	*Stay clear of the hot surface.*		*Check for leakage from hose and fittings.*
	*Exhaust gas is poisonous. Do not operate in an unventilated room or enclosed area.*		*Fire, open flame and smoking prohibited.*
	*Stop the engine before refueling.*		*HOT, avoid touching the hot area.*

USA and CANADA only					
	*Read INSTRUCTIONS FOR USE before use.*		*The engine emits toxic gas can kill you in minutes. Do not run in an enclosed area.*		*Hot surface can burn you. Stay away if engine has been running.*
	*Gasoline is extremely flammable and its vapors can explode.* *• Stop the engine before refueling.* *• Check for leakage from hoses and fittings.* *• Shut off fuel valve when the engine is not in use.*				

	On (Run)		*Engine start (Electric start)*		*Fuel (gasoline)*
	*Off (Stop)*		*Engine stop*		*Fuel (diesel)*
	*Engine oil*		*Cold engine*		*Fuel shut-off*
	*Add oil*		*Warm engine*		*Fuel system failure / malfunction*
	*Battery*		*Electrical preheat* (Low tem-perature start aid)		*Choke*
	*Fast*		*Run position*		*Plus ; positive polarity*
	*Slow*		*Stop position*		*Minus ; negative polarity*
	*Primer*		*Push primer*		*Do not push primer*
2X	*Two times*				

1. SAFETY PRECAUTIONS

Please make sure you review each precaution carefully.



EXHAUST PRECAUTIONS

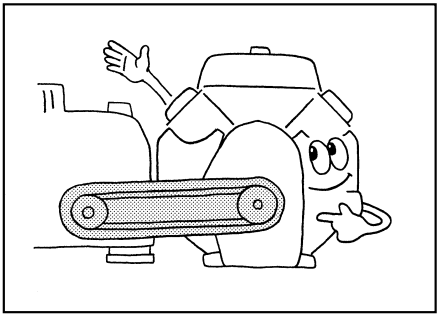
- Never inhale exhaust gas.
  It contains carbon monoxide, a colorless, odorless and extremely dangerous gas which can cause unconsciousness or death.
- Never operate the engine indoors or in a poorly ventilated area, such as tunnel, cave, etc.
- Exercise extreme care when operating the engine near people or animals.
- Keep the exhaust pipe free of foreign objects.

REFUELING PRECAUTIONS

- Be sure to stop the engine prior to refueling.
- Do not overfill the fuel tank.
- If fuel is spilt, wipe it away carefully and wait until the fuel has dried before starting the engine.
- After refueling, make sure that the fuel cap is secured to prevent spillage.

FIRE PREVENTION

- Do not operate while smoking or near an open flame.
- Do not use around dry brush, twigs, cloth rags, or other flammable materials.
- Keep the engine at least 3 feet (1 meter) away from buildings or other structures.
- Keep the engine away from flammables and other hazardous materials (trash, rags, lubricants, explosives).



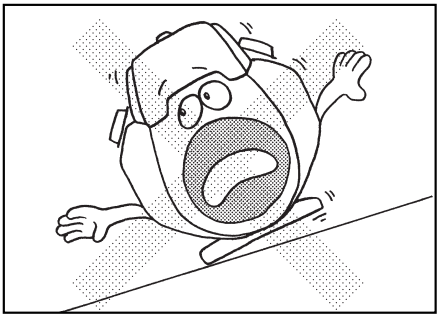
PROTECTIVE COVER

■ **Place the protective covers over the rotating parts.**
If rotating parts such as the drive shaft, pulley, belt, etc. are left exposed, they are potentially hazardous.
To prevent injury, equip them with protective covers or shrouds.

■ **Be careful of hot parts**.
The muffler and other engine parts become very hot while the engine is running or just after it has stopped. Operate the engine in a safe area and keep children away from the running engine.

■ Never make adjustments on the machinery while it is connected to the engine, without first removing the ignition cable from the spark plug. Turning the crankshaft by hand during adjusting or cleaning might start the engine, and the machinery with it, causing serious injury to the operator.

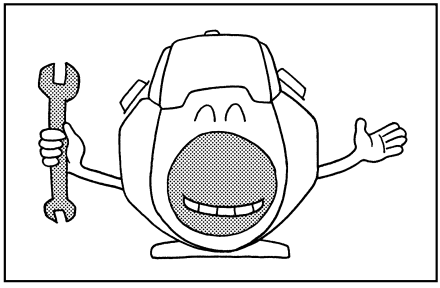
■ Never run the engine with governor disconnected, or operate at speeds in excess of 3600 rpm load.



SURROUNDINGS

■ Operate the engine on a stable, level surface free of small rocks, loose gravel, etc.

NOTE
Operating the engine at a steep incline may cause seizure due to improper lubrication even with a maximum oil level.



- **Drain the fuel when transporting the engine.**
- **Do not move the engine while in operation when it has been removed from the equipment.**
- Keep the unit dry (do not operate it in rainy conditions).

PRE-OPERATION CHECKS.

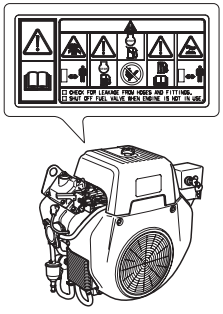
- Carefully check fuel hoses and connections for looseness and fuel leakage. Leaking fuel creates a potentially dangerous situation.
- Check bolts and nuts for looseness. A loose bolt or nut may cause serious engine trouble.
- Check the engine oil daily and refill if necessary.
- Check the fuel level and refill if necessary.
  Do not overfill the tank.
- Wear snug fitting working clothes when operating the engine.
  Loose aprons, towels, belt, etc., may be caught in the engine or drive train, causing a dangerous situation.

PRECAUTIONS ON THE HANDLING OF THE WARNING LABEL

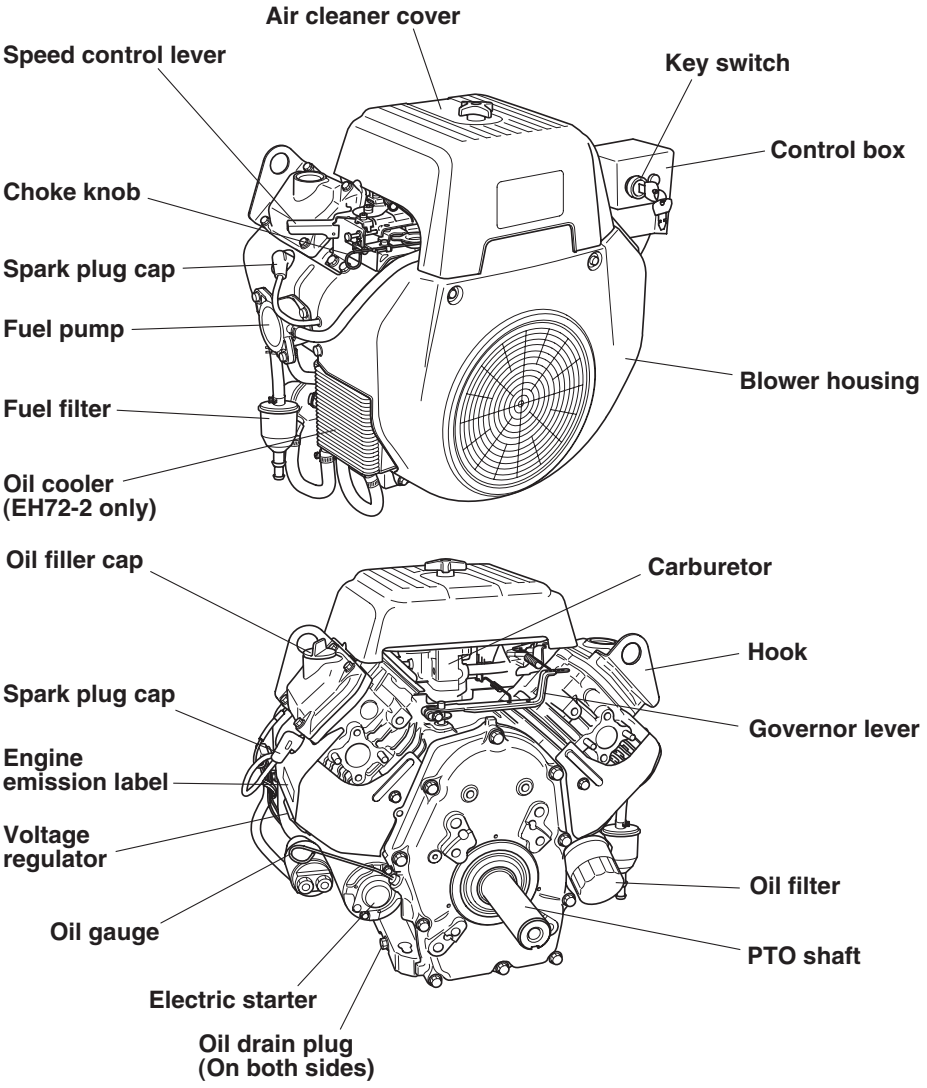
- Warning labels are affixed to our engines with regard to particularly serious dangers. When using the engines, please use them safely after carefully reading the instruction manual and understanding the dangers.

Warning Label Exclusively for the United States and Canada

For use in the United States or Canada, please affix the label suited to the region from among the enclosed warning labels.



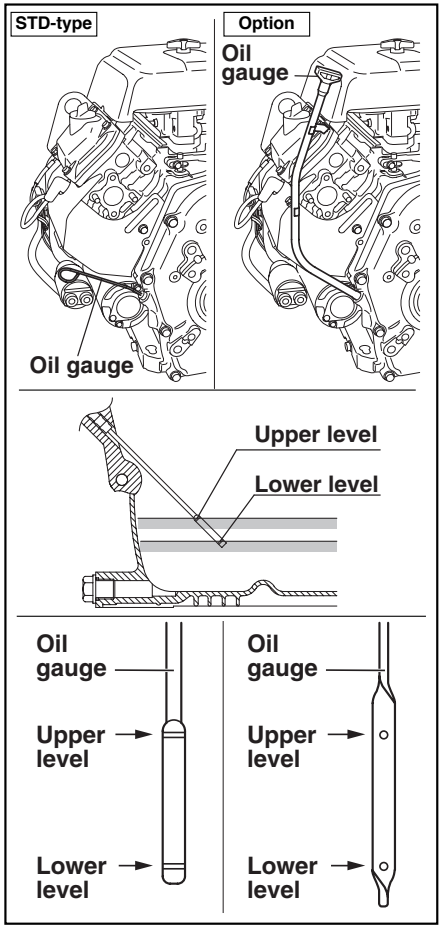
2. COMPONENTS



REMARKS :

- Fuel tank, valve (sediment bowl type is recommended), fuel hoses, and fuel filter are required for connecting fuel source to carburetor.
- A battery rated at 12V-30AH (EH63/64/65), 12V-36AH (EH72-2) or larger with the specified cable are required for electric starter operation. Make the proper electrical wiring arrangements before normal engine operation.
  (See Section 4 Battery Installation for instructions.)

3. PRE-OPERATION CHECKS



CHECK ENGINE OIL (DAILY)

Before checking or refilling engine oil, be sure the engine is not running and is located on a stable, level surface.

■ If the oil level is below the lower level line on the oil gauge, refill with the proper oil (see table) to the upper level.
OIL CAPACITY : 1.55 liter

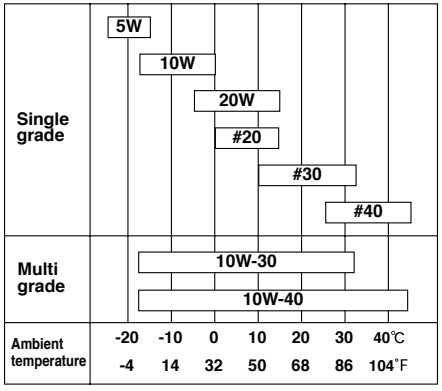
■ When filling oil in the engine, keep the engine level and fill the oil up to the upper mark of the oil gauge. Measure the oil level with the oil gauge plugged in position.

■ After an oil change, run the engine, and recheck the oil level. The oil level may drop a little as the oil fills the oil filter. Fill the oil up to the upper mark of the oil gauge.

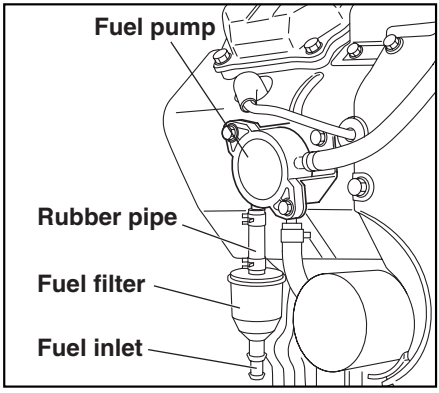
■ Change oil if it is contaminated. (See Section 8 Maintenance Schedule.)

■ Use 4-stroke automotive detergent oil of API service class SE or higher grade (SG, SH or SJ is recommended).

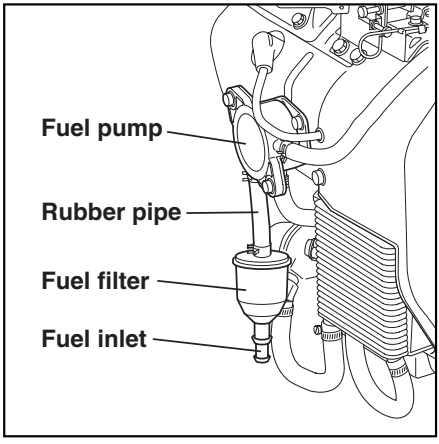
■ If multi-grade oil is used, oil consumption tends to increase when the ambient temperature is high.



(EH63/64/65)



(EH72-2)



CHECK FUEL

⚠ WARNING

Do not refuel while smoking, near an open flame or other potential hazards.

NOTE :
THIS ENGINE IS CERTIFIED TO OPERATE ON AUTOMOTIVE UNLEADED GASOLINE.

■ The fuel tank shall be provided separately, because the engine is not equipped with a fuel tank.

A fuel valve and fuel filter should be connected between the fuel tank and fuel pump.

Securely connect with fuel hoses to the fuel pump to prevent leakage.

■ Fuel tanks may be mounted up to 0.66 meters (2 feet) below the carburetor.

If the fuel tank is mounted above the carburetor, a fuel shut off valve must be connected between the fuel tank and fuel pump. The fuel valve must be shut off when the engine is not operating to prevent fuel from flooding the carburetor.

■ A serious accident may occur if the fuel hose comes off. Properly secure the fuel line connections by completely inserting the hose onto the fittings and securing the connection with a hose clamp.

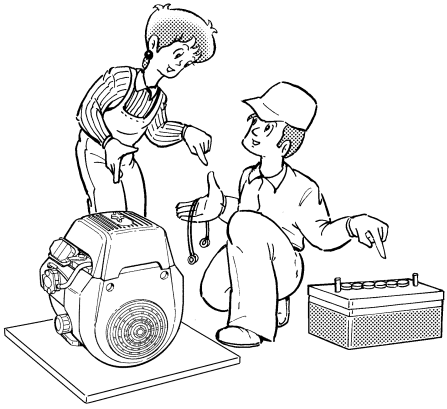
■ Use automotive unleaded gasoline only.

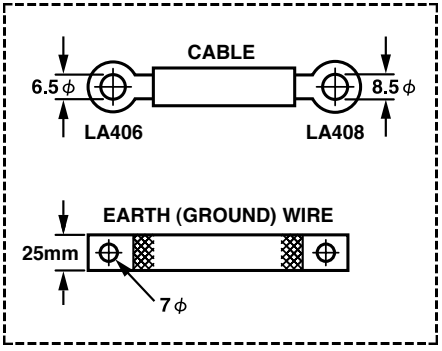
■ Stop the engine and close the fuel valve before filling the fuel tank.

■ Wipe off any spilled fuel before starting the engine.

4. BATTERY INSTALLATION

For electric starter operation, proper electric wiring arrangements are needed before normal engine operation.





PARTS NEEDED

- Use a battery rated 12V-30AH (EH63/64/65), 12V-36AH (EH72-2) or larger.
- Use a proper cable and ground wire to connect battery and key switch and electric starter.

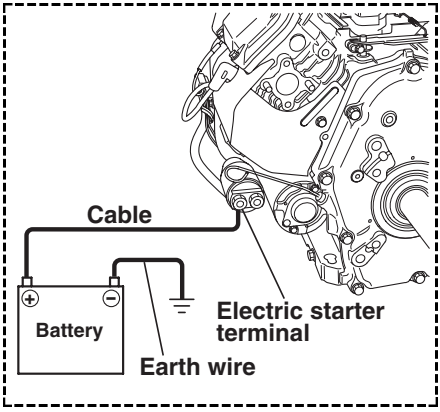
BATTERY CABLE

CABLE LENGTH	CABLE DIA.	WIRE GAUGE		
		AWG (BS) BWG	SAE	JIS
Less than 1.5 m	7.3 mm	1	6	AV15
1.5 m to 2.5 m	8.5 mm	0	4	AV20
2.5 m to 4.0 m	10.8 mm	3/0	2	AV30

GROUND WIRE, use a flat braided wire of 0.03 sq. in. or larger sectional area. (SAE GAUGE 4)

KEY SWITCH CABLE

CABLE LENGTH	CABLE DIA.	WIRE GAUGE		
		AWG (BS)	BWG	JIS
Less than 1.5 m	1.5 mm	14	16	AV1.25
1.5 m to 3.0 m	1.9 mm	12	14	AV2
3.0 m to 5.0 m	2.4 mm	10	13	AV3



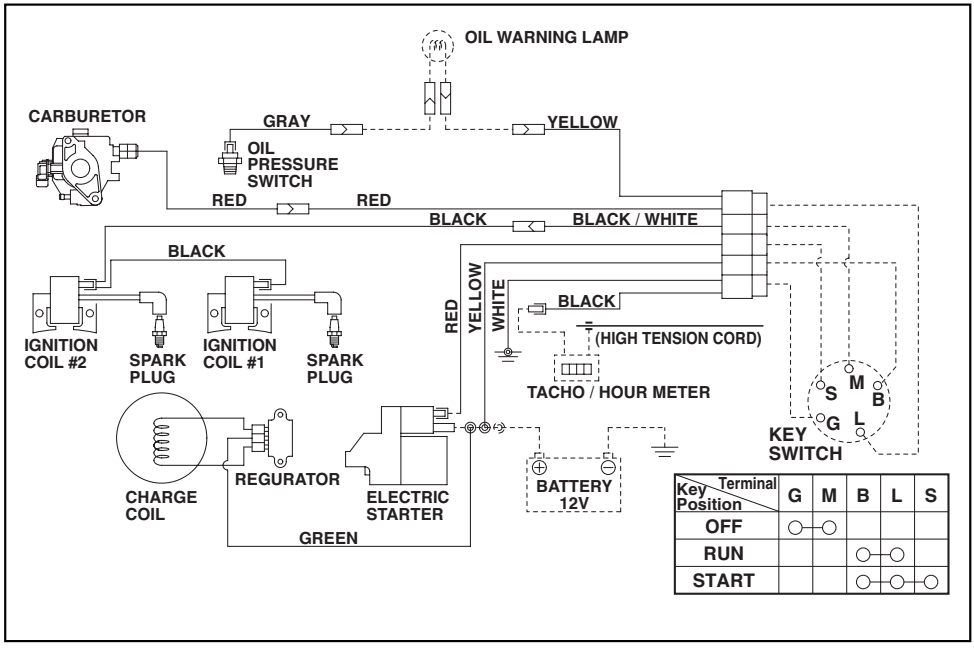
WIRING

- **Connect positive terminal of electric starter and positive terminal of the battery with battery cable.**
- **Ground negative terminal of the battery to the body of engine or machine with ground wire.**

NOTE

Tighten bolts and nuts on terminals securely so they will not be loosened by vibration.

WIRING DIAGRAM



Optional hardware shown by dotted lines. Select wires of proper gauge and connect battery as shown by the dotted line in the wiring diagram.

5. OPERATING YOUR ENGINE

NOTE
Following operating method is for the STD type speed control lever. As to the fixed type speed control lever (exp. Generator spec.), do not move it otherwise the generator component such as voltage regulator may be damaged.

STARTING

FUEL VALVE

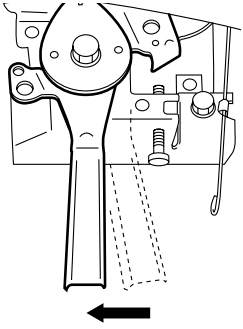
1

(Provided by the equipment manufacturer)

Open the fuel valve.

SPEED CONTROL LEVER

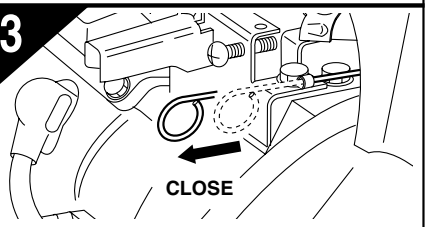
2



Set the speed control lever 1/3 of the way towards the high speed position.

CHOKE KNOB

3



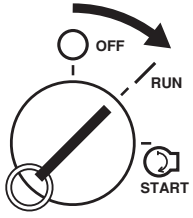
Pull the choke knob.

- If the engine is cold or the ambient temperature is low, pull the choke knob fully.
- If the engine is warm or the ambient temperature is high, pull the choke knob half-way, or keep it fully open.

3 Choke adjustment is not necessary for the auto-choke engine.

ELECTRIC STARTER

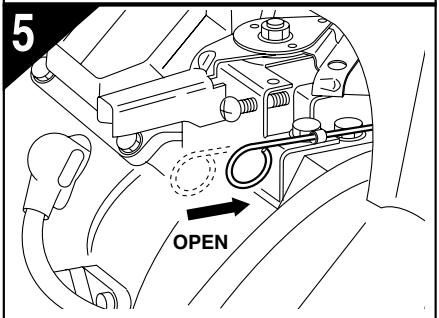
4



Turn the key switch to the "START" position.

- Do not operate the electric starter continuously for more than 5 seconds, even if the engine dose not start.
- If the engine failed to start, set the key to the "RUN" position and wait for about 10 seconds before retrying.
- Never turn the key switch to the "START" position while engine is running.

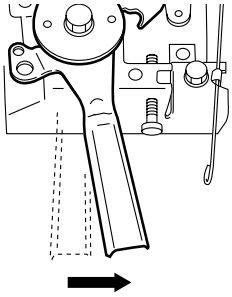
CHOKE KNOB



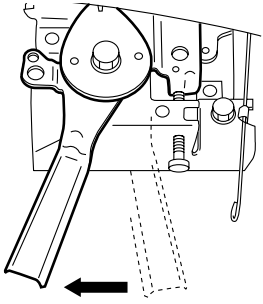
- After starting the engine, gradually open choke by pushing the choke knob and finally keep it fully opened.
- Do not fully open the choke immediately when the engine is cold or the ambient temperature is low, because the engine may stop.

5 Choke adjustment is not necessary for the auto-choke engine.

SPEED CONTROL LEVER



After the engine starts, set the speed control lever at the low speed position and warm it up without load for a few minutes.



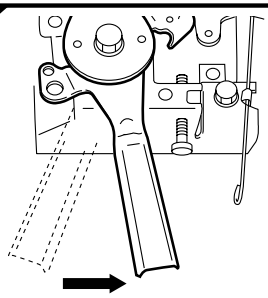
Gradually move the speed control lever toward the high speed position and set it at the required engine speed.

NOTE :
Whenever high speed operation is not required, slow the engine down (idle) by moving the speed control lever to save fuel and extend engine life.

STOPPING

SPEED CONTROL LEVER

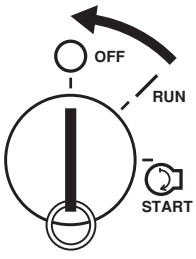
1



Set the speed control lever at the low speed position and allow the engine to run at low speed for 2 or 3 minutes before stopping.

ELECTRIC STARTER

2



Turn the key switch to the "STOP" position.

FUEL VALVE

3

Close the fuel valve.

STOPPING ENGINE WITH THE FUEL VALVE

Close the fuel valve while the engine is running and wait until the engine stops.

Set the key switch to the "STOP" position after stopping the engine.

This procedure eliminates the fuel from the carburetor.

Avoid allowing the fuel to remain in the carburetor over long periods, or the passages of the carburetor may become clogged and malfunctions may result.

6. EASY TROUBLESHOOTING

WHEN ENGINE WILL NOT START:

■ Perform the following checks before you take the engine to your Robin dealer.

■ If you still have trouble after completing the checks, take the engine to your nearest Robin dealer.

Is there enough compression?

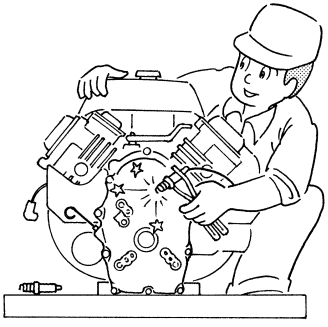
If the spark plug is loose, tighten it.

Is the spark plug wet with gasoline?

1. Choke (close choke lever) and slowly start the engine for 2 or 3 seconds. Remove the plug and check if its electrode is wet. If the electrode is wet, fuel is well supplied to your engine.
2. When the electrode is dry, check to find where the fuel is restricted. (Check the fuel intake of the carburetor and fuel strainer intake.)
3. In case the engine does not start with well supplied fuel, try using fresh fuel.

⚠ WARNING

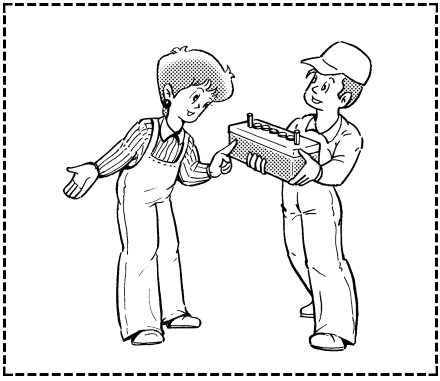
Wipe off spilled fuel carefully before checking the spark plug. Place spark plug as far away from spark plug hole as possible. Do not hold spark plug by hand while checking.



Is there a strong spark across the electrode?

1. Remove the spark plug and connect it to the plug cap.

   Turn key switch to START position while grounding spark plug against engine body.
2. Try with a new spark plug if the spark is weak or there is no spark.
3. The ignition system is faulty if there is no spark with a new spark plug. Take your engine to your nearest Robin dealer.



Is your battery well charged ?

Check the battery, it may be discharged and unable to operate the electric starter.

Consult your nearest dealer or service shop.

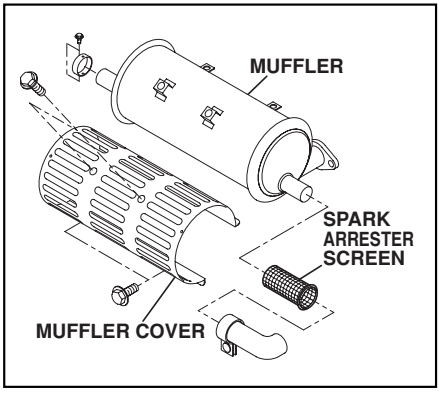
7. SPARK ARRESTER (OPTIONAL)

In a dry or wooded area, it is recommendable to use the product with a spark arrester. Some areas require the use of a spark arrester. Please check your local laws and regulations before operating your product.

The spark arrester must be cleaned regularly to keep it functioning as designed. A clogged spark arrester :

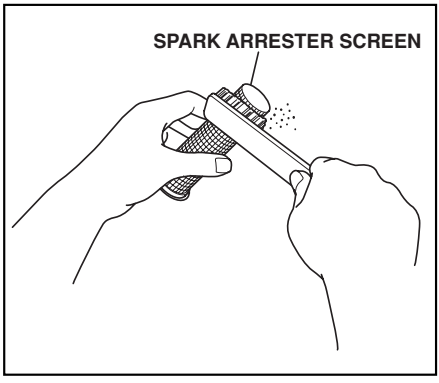
- Prevents the flow of exhaust gas
- Reduces engine output
- Increases fuel consumption
- Makes starting difficult

If the engine has been running, the muffler and the spark arrester will be very hot. Allow the muffler to cool before cleaning the spark arrester.



How to remove the spark arrester

1. Remove the flange bolts from the muffler cover and remove the muffler cover.
2. Remove the special screw from the spark arrester and remove the spark arrester from the muffler.



Clean the spark arrester screen

Use a brush to remove carbon deposits from the spark arrester screen.
Be careful to avoid damaging the screen.

The spark arrester must be free of breaks and holes. Replace the spark arrester if it is damaged.

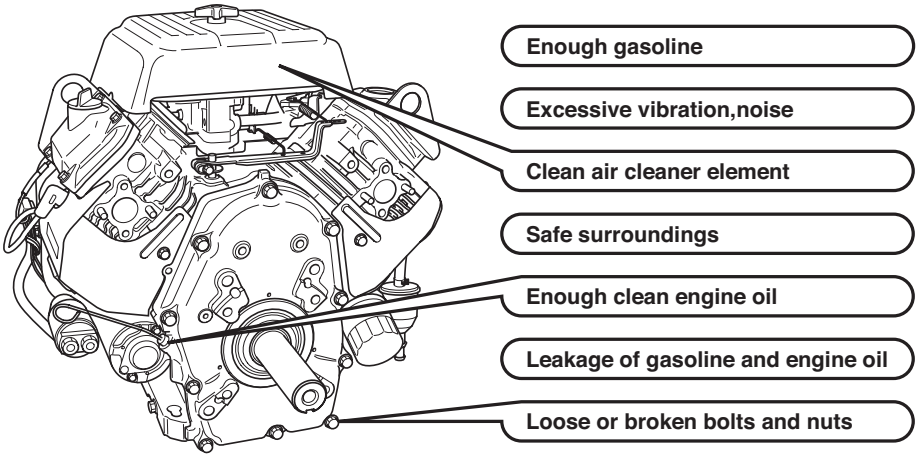
Install the spark arrester, and muffler protector in the reverse order of disassembly.

8. MAINTENANCE SCHEDULE

MAINTENANCE, REPLACEMENT, OR REPAIR OF EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY NONROAD ENGINE REPAIR ESTABLISHMENT OR INDIVIDUAL.

DAILY INSPECTION

Before running the engine, check the following service items.



PERIODIC MAINTENANCE

Periodic maintenance is vital to safe and efficient operation of your engine. Check the table below for periodic maintenance intervals.

IT IS ALSO NECESSARY FOR THE USER OF THIS ENGINE TO CONDUCT THE MAINTENANCE AND ADJUSTMENTS ON THE EMISSION-RELATED PARTS LISTED BELOW TO KEEP THE EMISSION CONTROL SYSTEM EFFECTIVE.

The emission control system consists of the following parts:

(1) Carburetor and internal parts
(2) Cold start enrichment system, if applicable
(3) Intake manifold, if applicable
(4) Air cleaner elements
(5) Spark plug
(6) Magneto or electronic ignition system
(7) Spark advance/retard system, if applicable
(8) Exhaust manifold, if applicable
(9) Hoses, belts, connectors, and assemblies

The maintenance schedule indicated in the following table is based on the normal engine operation. Should the engine be operated in extremely dusty condition or in heavier loading condition, the maintenance intervals must be shortened depending on the contamination of oil, clogging of filter elements, wear of parts, and so on.

Periodic Maintenance Schedule table

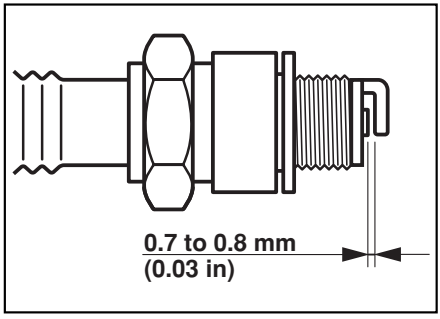
Maintenance Items	Every 8 hours (Daily)	Every 50 hours	Every 200 hours	Every 500 hours	Every 1000 hours
Clean engine and check bolts and nuts	● (Daily)				
Check for leakage from hoses and fitting	● (Daily)				
Check and refill engine oil	●				
Change engine oil (*Note 1)	● (Initial 20 hours)	● (Every 100 hours)			
Replace engine oil filter (*Note 1)	● (Initial 20 hours)		●		
Check battery electrolyte fluid level		●			
Clean spark plug		●			
Clean air cleaner		●			
Spark arrester (optional part)		● (Every 100 hours)			
Replace air cleaner element			●		
Clean fuel strainer			●		
Clean and adjust spark plug and electrodes			●		
Replace spark plug				●	
Remove carbon from cylinder head				●	
Clean carburetor				●	
Clean engine base (oil pan)				●	
Check and adjust valve clearance				●	
Replace fuel lines					● (Every 2 years)
Overhaul engine (*Note 2)					●

*Note 1 : Initial oil change and oil filter replacement should be performed after 20 hours of operation.
Thereafter change oil every hundred (100) hours and replace oil filter 200 hours.
Before changing oil, check for a suitable way to dispose of old oil. Do not pour it down into sewage drains, onto garden soil or into open streams. Your local zoning or environmental regulations will give you more detailed instructions on proper disposal.

*Note 2 : As to the procedures, please refer to the Service Manual or consult your nearest ROBIN service dealer.

*Note 3 : More frequent oil changing, oil filter replacement and air cleaner service on replacement may be necessary depending on operating conditions.
This would include dusty environment, high ambient temperature, heavy engine loading.

9. "HOW-TO" MAINTENANCE

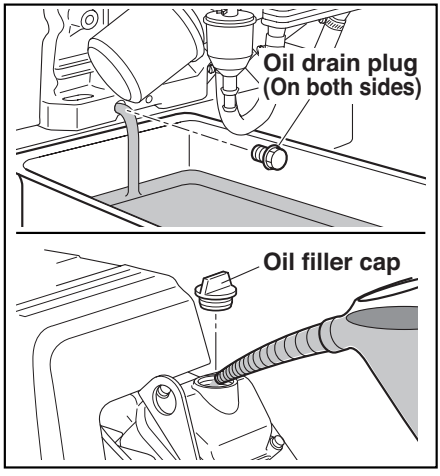


INSPECTING THE SPARK PLUG

■ Clean off carbon deposits on the spark plug electrode using a plug cleaner or wire brush.

■ Check electrode gap.
Adjust gap to :
0.7mm to 0.8mm (0.03 inches)

■ Use a proper spark plug :
BPR5ES (NGK)



ENGINE OIL CHANGE

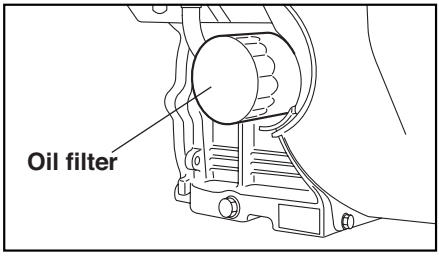
■ Initial oil change
・・・・・After 20 hours of operation

■ Thereafter
・・・・・Every 50 hours of operation

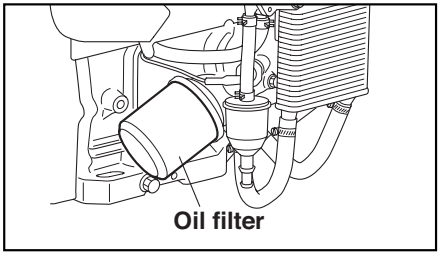
1. When changing oil, stop the engine and loosen the drain plug.
2. Re-install the drain plug before refilling oil.
3. Refer to the recommended oil table. (See Section 3 Pre-operation Checks)
4. Always use the best grade and clean oil. Contaminated oil, poor quality oil and shortage of oil cause damage to engine or shorten the engine life.

OIL CAPACITY : 1.55 liter

(EH63/64/65)

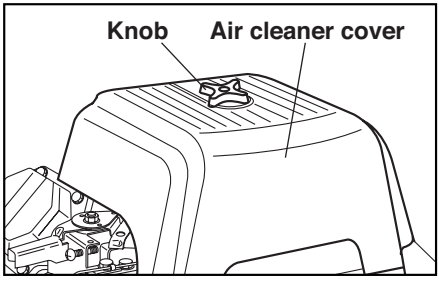


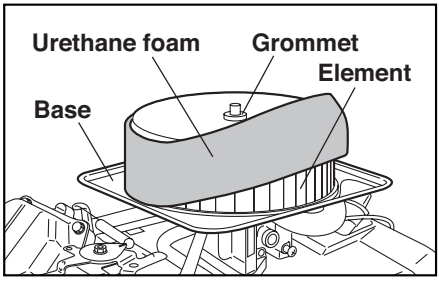
(EH72-2)



⚠ CAUTION

To prevent injury, pay attention to the spilled hot engine oil when replacing engine oil filter.





ENGINE OIL FILTER REPLACEMENT

- Initial engine oil filter replacement should be performed after 20 hours of operation. Thereafter replace the engine oil filter every 200 hours.
- When installing a new oil filter, apply oil to O-ring, attach the oil filter in position and tighten 2/3 turns by hand or with wrench after touching the O-ring to the sealing surface of engine.
- Run the engine for a minute ; stop the engine and check for oil leakage around the oil filter and recheck the oil level.

CLEANING AIR CLEANER

A dirty air cleaner element will cause starting difficulty, power loss, engine malfunctions, and shorten engine life extremely.

Always keep the air cleaner element clean. Replaced the air cleaner element set more often in dusty environments.

The air cleaner paper inner element and urethane foam outer element can be removed after removing knob and air cleaner cover. When installing, set the paper element and urethane foam on the air cleaner base. Check that the grommet is in position, and then install the cover with knob tightened securely.

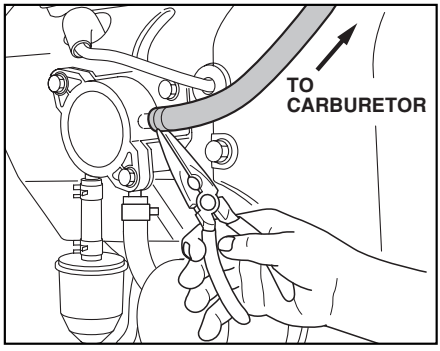
- Urethane Foam cleaning
  Wash and clean the urethane foam in kerosene. Saturate in a mixture of 3 parts kerosene and 1 part engine oil, and then squeeze to remove excess oil. Clean or replace the urethane foam element every 50 hours. (more often in dusty environments)

■ Paper element

Clean by tapping gently to remove dirt and blow off dust. Never use oil.
Clean or replace the paper element every 50 hours of operation, and replace element set every 200 hours or once a year.

Clean and replace air cleaner elements more often when operating in dusty environments.

(EH63/64/65)



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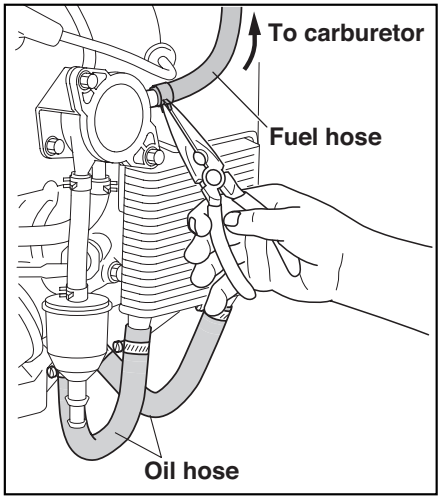


CHECKING BOLTS, NUTS AND SCREWS

Retighten loose bolts and nuts.
Check for fuel and oil leaks.
Replace damaged parts with new ones.
Keep safety in your mind.

FUEL AND OIL HOSE REPLACEMENT

⚠ WARNING

Take extreme caution when replacing fuel hose ; gasoline is flammable.

Replace the fuel and oil hose every 1,000 hours or every 2 years.
If fuel and oil hose leak is found, replace the fuel hose immediately.

CHECKING BATTERY

⚠ WARNING

Battery electrolyte is an acid and is poisonous and corrosive.
Serious injury results from contact with the skin, eyes or clothing.

If the electrolyte fluid is below level line, refill battery with distilled water.

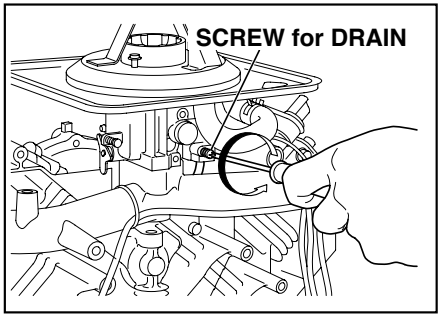
HIGH ALTITUDE ENGINE OPERATION

■ Please have an authorized Robin America service dealer modify this engine if it is to be run continuously above 5,000 feet (1,500 meters). Failure to do so, may result in poor engine performance, spark plug fouling, hard starting, and increased emissions.

■ Carburetor modification by an authorized Robin America service dealer will improve performance and allow that this engine meets EPA (Environmental Protection Agency) and California ARB (Air Resources Board) emission standards throughout its useful life.

■ An engine converted for high altitudes can not be run at 5,000 feet or lower. In doing so, the engine will overheat and cause serious engine damage. Please have an authorized Robin America service dealer restore high altitude modified engines to the original factory specification before operating below 5,000 feet.

10. PREPARATIONS FOR STORAGE

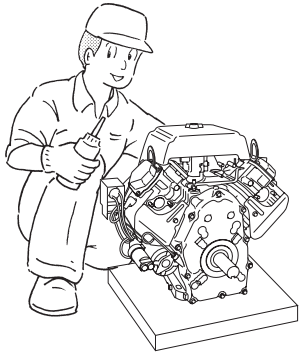


DISCHARGE FUEL (NO SMOKING !)

⚠ WARNING

Take extreme caution when draining gasoline. It is flammable.

Drain fuel from fuel tanks, carburetor and fuel line.



ENGINE OIL

- Change the engine oil with fresh oil.
- Remove the spark plug, pour about 5 cc of engine oil into the cylinder, slowly start the engine for 2 or 3 seconds, and re-install the spark plug.

CLEAN AND STORE

- Remove the spark plug wires from the spark plugs.
- Slowly turn the crankshaft until resistance is felt and leave it in that position.
- Clean the engine thoroughly with an oiled cloth, cover the engine, and store the engine indoors in a well ventilated, low humidity area.

11. SPECIFICATIONS

MODEL	EH63D	EH64D	EH65D	EH72-2D
Type	Air-Cooled, 4-Stroke, V-Twin Cylinder, Horizontal P.T.O. shaft, OHV Gasoline Engine			
Bore x stroke mm(in)	2-80 x 65 (3.15 x 2.56)			2-84 x 65 (3.31 x 2.56)
Displacement cm^3(cu. in)	653 (39.8)			720 (43.9)
Continuous Output kW (HP) / rpm	10.8 (14.5) / 3600	11.9 (16.0) / 3600	12.7 (17.0) / 3600	14.2 (19.0) / 3600
Maximum Output kW (HP) / rpm	13.4 (18.0) / 3600	15.3 (20.5) / 3600	16.4 (22.0) / 3600	18.7 (25.0) / 3600
Max. Torque N·m (kgf·m)/ rpm	43.3 (4.41) / 2000	44.4 (4.52) / 2200	45.6 (4.65) / 2500	51.0 (5.2) / 2500
Direction of Rotation	Counterclockwise as viewed from P.T.O. shaft side			
Lubricant	Automotive Engine Oil SAE #20, #30 or 10W-30 ; Class SE or higher (SG, SH or SJ is recommended)			
Capacity of Lubricant liter (U.S. gal)	1.55 (0.41)			
Fuel	Automotive Unleaded Gasoline			
Spark plug	BPR5ES (NGK)			
Starting System	Electric Starter			
Dry Weight kg (lb)	44 (97.0)			46 (101.3)
Dimension (L x W x H) mm (in)	317 x 477 x 475 (12.5 x 18.8 x 18.7)			317 x 477 x 480 (12.5 x 18.8 x 18.9)
Valve Clearance (Intake & Exhaust)	0.1 ± 0.02 mm (0.0039 ± 0.0008 in) Note : Adjust the valve clearance while the engine is cold.			
Emissions Durability Period	—	1000 hours		


SUBARU

(EN) **[appendix]**

Instructions for treatment as waste

When disposing this product ,make sure that the fuel and oil should be drained from the engine ,and submit to local regulations.

(FR) **[Annexe]**

Instructions pour le traitement des déchets

Quand ce produit doit être mis au rebut, s'assurer que le carburant et l'huile ont été vidangés correctement à partir du moteur, et que les règlements locaux sont bien observés.

(DE) **[Anhang]**

Anweisungen für die Behandlung als Abfall

Bei der Entsorgung dieses Produkts sicherstellen, dass der Kraftstoff und das Öl aus dem Motor abgelassen wird und unter Befolgung aller örtlich gültigen Bestimmungen entsorgt wird.

(NL) **[aanhangsel]**

Instructies voor afvalverwerking

Wanneer u dit product weggooit, moet u ervoor zorgen dat alle brandstof en olie uit de motor verwijderd is en dient u zich te houden aan de ter plaatse geldende regelgeving.

(ES) **[anexo]**

Instrucciones para el tratamiento de los residuos

Cuando este producto debe ponerse al rechazo, asegurarse de que el combustible y el aceite se purgaron correctamente a partir del motor, y que se observan bien los reglamentos locales.

(IT) **[appendix]**

Istruzioni per lo smaltimento

Per lo smaltimento di questo prodotto, assicurarsi di aspirare il carburante e l'olio dal motore, in conformità con le regolamentazioni locali.

(PT) **[apêndice]**

Instruções para tratamento como resíduo

Quando eliminar este produto, assegure-se de que o combustível e o óleo são escoados do motor e sujeitos às regulamentações locais.

(GR) **[Προσάρτημα]**

Οδηγίες για επεξεργασία ως απόβλητα

Όταν απορρίπτετε αυτό το προϊόν, βεβαιωθείτε ότι τα καύσιμα και τα λιπαντικά έχουν αδειάσει από τη μηχανή και τηρήστε τους τοπικούς κανονισμούς.

(NO) **[vedlegg]**

Instruksjoner for behandling av avfall

Når dette produktet kasseres, må man påse at drivstoffet og oljen tømmes fra motoren og behandles ifølge lokale renovasjonsforskrifter.

(SE) **[appendix]**

Anvisningar för avfallshantering

När denna produkt ska kasseras, se då till att bränslet och oljan töms ur motorn, och att lokala bestämmelser efterföljs.

(FI) **[LIITE]**

Ohjeita jätteiden käsittelemisestä

Hävittäessäsi tätä tuotetta muista, että polttoaine ja öljy täytyy tyhjentää moottorista.
Muista myös noudattaa paikallisia säädöksiä.

(DK) **[tillæg]**

Anvisninger for behanling af affald

Når du bortskaffer dette produkt, bedes du sikre dig, at motoren tømmes for brændstof og olie og afhændes i henhold til lokale regler.

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SUBARU

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